

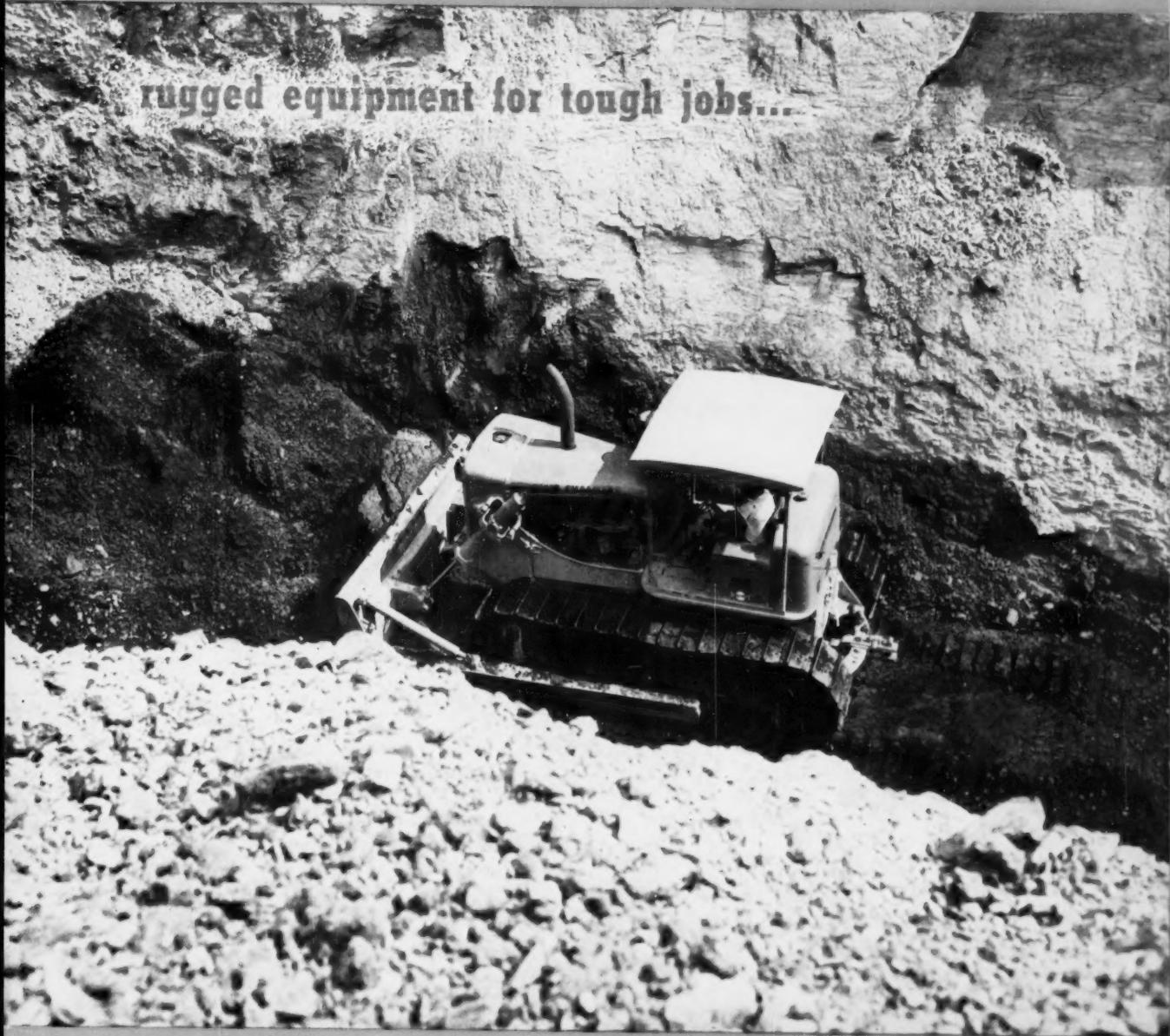
COAL MINING

UNIVERSITY MICROFILMS
313 N 1ST ST
ANN ARBOR, MICH

June, 1960

Volume 37, No. 6

rugged equipment for tough jobs...



Allis-Chalmers HD-21 at C & K Coal Co., West Freedom.

A-1098A

Highway



HIGHWAY EQUIPMENT COMPANY

6465 Hamilton Ave. • Pittsburgh 6, Pa.

40 Hoover Ave. • Du Bois, Pa.

5245 Peach St. • Erie, Pa.



New power shift transmission, with exclusive torque divider, optional on the D9, allows on-the-go split-second shifts and change of direction under full load with no clutching. (Not on machine in photo.)

One D9 with U-blade does work of two tractors with standard blades

A big Cat D9 Tractor with a 20-foot Balderson U-blade* replaced two tractors with standard blades when it went to work on the 100,000-ton pile of washed No. 9 coal.

Handling as many as 25 tons a push, the D9 moves coal away from an overhead tripper belt and dozes it into hoppers for conveyance to nearby barges. On the job 12 hours a day, the unit spreads the mine's 7000-ton daily output of clean minus 6-inch coal. During barge loading operations, the D9 feeds the hoppers up to 1500 tons an hour.

This is one more case that shows why the big Caterpillar-built Tractor is known as the "Take Charge D9." Reports all across the country prove the D9 consistently outproduces other tractors in its power range and does it for less cost.

*Manufactured by Balderson, Inc.

Ruggedness and power are built into the D9 with such Caterpillar features as these:

- **335 HP at the flywheel** enables the D9 to handle the biggest loads faster than ever.
- **Lifetime lubricated track rollers** with the patented floating ring seals eliminate maintenance time and lubrication until rollers are rebuilt.
- **Massive undercarriage** with major improvements in all track components adds to running gear life.
- **New equalizer bar** gives operator greater confidence in side hill operations and helps increase production.

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

Beckwith
MACHINERY COMPANY

6550 HAMILTON AVENUE, PITTSBURGH 6, PENNSYLVANIA
361-369 CONGRESS STREET, BRADFORD, PENNSYLVANIA
OLD TOWN ROAD, CLEARFIELD, PENNSYLVANIA
1356 EAST 12TH STREET, ERIE, PENNSYLVANIA
ROUTE 219 NORTH, SOMERSET, PENNSYLVANIA
BUCKHANNON PIKE, CLARKSBURG, WEST VIRGINIA

COAL MINING

Vol. XXXVII June, 1960 No. 6

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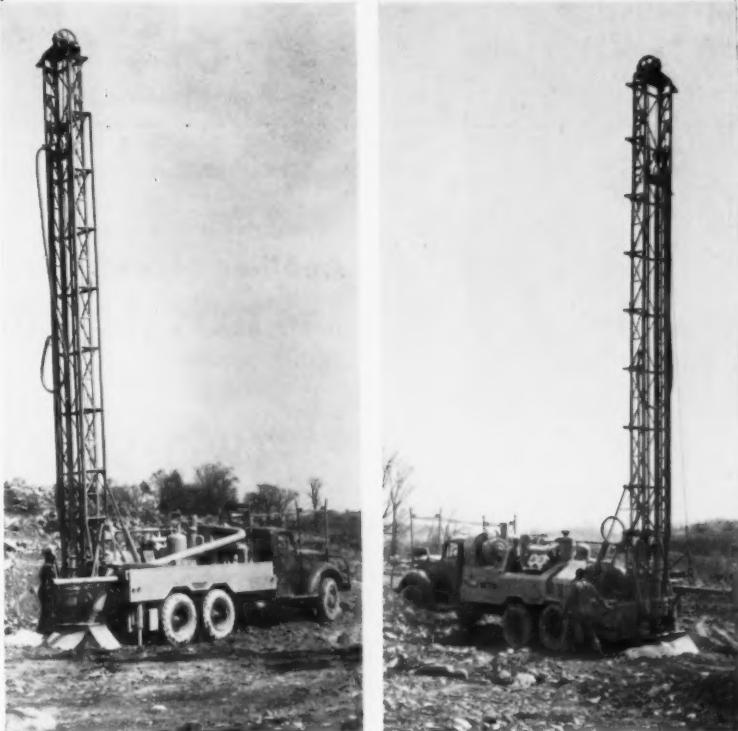
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ADVANCE PRINTING & LITHO CO.

1118-20 Chestnut St.

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DAVEY Rotary Drills cut coal drilling costs!



Davey Model 8-MA at U.S. Coal Co., Holloway, Ohio.

For more economical, faster drilling . . . increased production at reduced costs, leading strip operators rely on Davey.

Suitable for mounting on any make of truck, Davey Rotary Drills move fast between blast holes . . . are ideal for low cost core drilling with air . . . easy to set in drilling position.

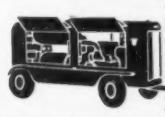
Daveys are offered in 8 different truck-mounted models—air blast, mud pump or combination types. Rated capacities to 3,500 ft. Features include choice of power take-off or separate power unit operation, automatic hydraulic feed with manual override, heavy-duty rotary table and rugged tubular box-type mast. Tractor mounted drills also available.

A-232A

Write for Bulletin E-702S!

DAVEY

pioneers of
"air-cooled air"



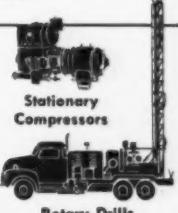
Portable Compressors



Tank-Mounted Compressors

Auto-Air
Compressors

Air Tools



Stationary
Compressors

Rotary Drills

DAVEY COMPRESSOR CO.

Kent, Ohio

**Another Beckwith Program
TO SERVE YOU BETTER!**

**TWO-SHIFT
OPERATION in PITTSBURGH
PARTS and SERVICE
DEPARTMENTS**



**7 a.m. to 11:15 p.m. Weekdays
8 a.m. to Noon Saturdays**

Now You Can Get Pittsburgh Shop Repairs Twice as Fast . . . at No Extra Cost!

To provide you with better and quicker service . . . Beckwith's Pittsburgh Parts and Service Departments have been placed on a double-shift basis. In effect this means that repair jobs at this location can be done in half the number of days without any special increase in rate. Your Caterpillar equipment gets back on the job faster to earn more profits for you.

If you have an assembly or small repair job, such as a master clutch, you can bring it in the late afternoon and it will probably be ready for you the next morning . . . keeping your downtime to only a few hours.

In addition to these advantages on Pittsburgh Shop jobs, our earlier hours permit our Caterpillar-trained field servicemen to be on your job an hour sooner than was possible in the past.

Keep in mind that you can bring your machines in for minor repairs or major re-building any time from 7 a.m. to 11:15 p.m. weekdays. Take advantage of this two-shift operation to reduce your downtime . . . and still enjoy the benefits of experienced Caterpillar mechanics working with specialized tools.



Mike Trugan
Pittsburgh Service Manager

Here's Added Convenience, Faster Service in Ordering and Pick-Up of Cat Parts

Many Caterpillar machine owners appreciate the added convenience of placing their parts orders late in the day or early in the morning. To the owner-operator this can mean valuable daylight time saved for actual machine work hours on the job. Parts can be ordered from Pittsburgh as late as 10 p.m. for pick-up at 7 a.m. the next day.

Our double-shift operation pays off for you in other advantages, too. Our expeditor can work with Caterpillar Parts Depots as late as 9:30 p.m. to speed delivery of parts not ordinarily carried in stock.

On Saturday our Pittsburgh Parts Departments and Shop are open until noon as usual. We sincerely trust you will find this new Beckwith Service of early and late hours helpful to your business.



Frank A. Dunham
Pittsburgh Parts Manager

*Caterpillar, Cat and Traxcavator are Registered Trademarks of Caterpillar Tractor Co.



MACHINERY COMPANY

Earthmoving Equipment Is Our Business—Service, Our Concern

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BUCKHANNON PIKE, CLARKSBURG, WEST VIRGINIA

S. K. WELLMAN COMPANY simplifies ordering of replacement parts

At this time of year, coal production soars. Mine equipment repair and maintenance activity attains its peak.

Consequently, operators are vitally interested in any and all developments aimed at simplifying the procurement of proper replacement and repair parts — with resultant speeding of reconditioning work.

Among interesting, new, useful parts selection aids are 3 catalogs just published by The S. K. Wellman Company, Bedford, Ohio.

Because these booklets provide an unusually complete directory of Wellman mine products and are



carefully cross-indexed with original equipment parts numbers, they are worthy of discussion here. Also, these directories supplement Wellman Catalog 59-M which is a special brochure listing deep mine replacement parts.

In fact, they provide an outstanding example of how manufacturers can save tremendous amounts of time and money for their customers by properly listing and accurately identifying each of their parts.

Wellman is a leading manufacturer of all-metal clutch plates, facings, matched facing sets and brake lin-

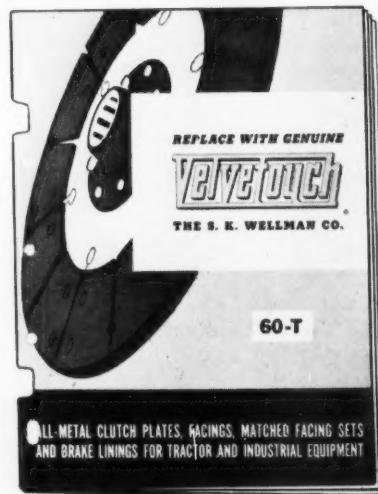


Wellman Manual 60-A presents complete data on clutch plates, facings, matched facing sets and brake linings for automotive equipment, widely used in mines.

Wellman Manual 59-M lists replacement parts for deep mine equipment.

Wellman Manual 60-R is a companion booklet to 60-A and 60-T. It is a cross-index of Velvetouch and Velvetouch Feramic and manufacturers' parts numbers.

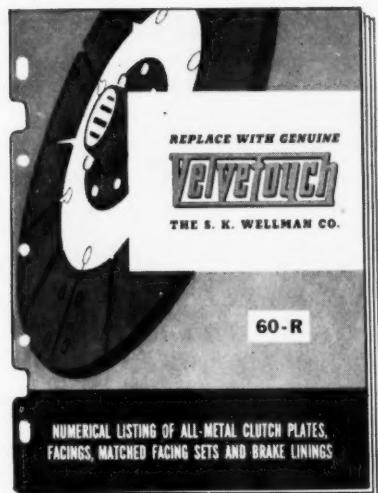
Wellman Manual 60-T lists clutch and brake replacement parts for tractors, shovels, locomotives, pumps, etc. Also, for material-handling machinery.



ALL-METAL CLUTCH PLATES, FACINGS, MATCHED FACING SETS AND BRAKE LININGS FOR TRACTOR AND INDUSTRIAL EQUIPMENT

ings. It produces these items as original installations for many makes of tractors, industrial material-handling and mine equipment. In addition, Wellman makes and markets, through equipment distributors, a complete line of replacement parts for the same types of machinery. These are offered under the well-known tradenames "Velvetouch" and "Velvetouch Feramic."

In its new parts manuals, Wellman lists various machinery makes in systematic, alphabetical order. These are classified according to serial number, original clutch make, clutch dimensions, drilling, quantity



NUMERICAL LISTING OF ALL-METAL CLUTCH PLATES, FACINGS, MATCHED FACING SETS AND BRAKE LININGS

and type of rivets required.

Among prominent mine equipment makes listed, with complete cross-indexing are Allis-Chalmers, Baldwin-Lima-Hamilton, Brookville Locomotive, Bucyrus-Erie, Caterpillar, Chicago Pneumatic, Curtiss-Wright, Euclid, Fairmount, Fate-Root-Heath, Gar Wood, Goodman, Hough, International, Jaeger, Jeffrey, Joy, Keystone Driller, LeTourneau-Westinghouse, Link-Belt, Lorain (Thew Shovel), Manitowoc, Michigan, Osgood, P&H, Schramm, Tractolader, Unit, Vulcan, Whitcomb and others.

ASK ANYONE who's using tractors



Allis-Chalmers HD-21 . . . A. P. Weaver & Sons, Fryburg.

They'll tell you their best operating, most economical piece of fine mine equipment is

A-1678A

Allis-Chalmers HD-21



Highway

HIGHWAY EQUIPMENT COMPANY

6465 Hamilton Ave. • Pittsburgh 6, Pa.
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Allis-Chalmers • Master • Lima • Thor • Heltzel • Gar Wood
Jaeger • Buffalo-Springfield • Ottawa
Rogers Trailers • M-R-S • Lippmann Crushers

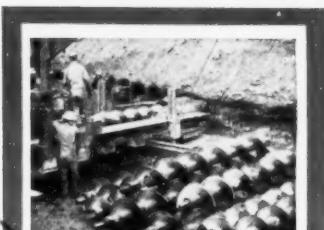
SELF-MOVING



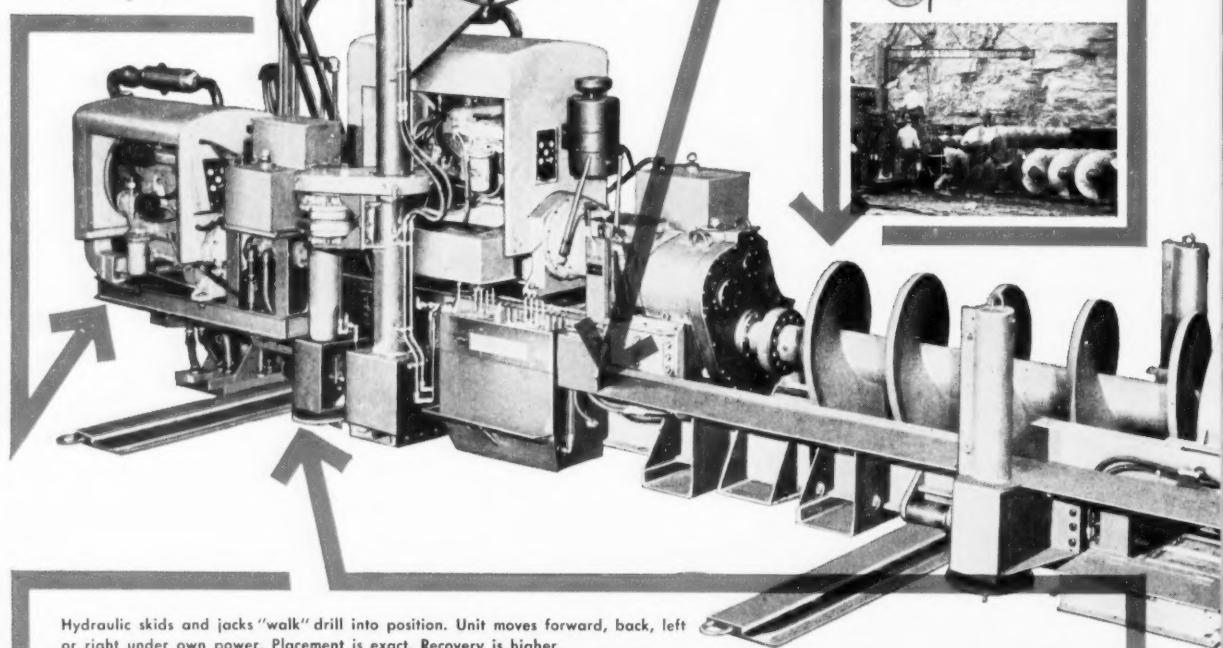
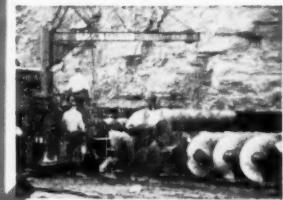
Double-acting hydraulic cylinders provide direct drive and maximum thrust to drilling head.



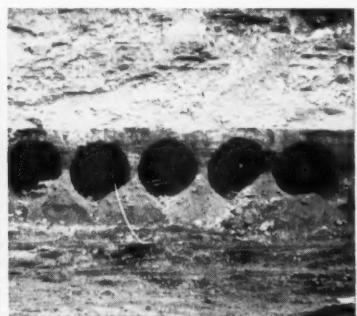
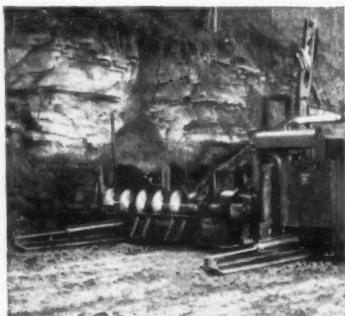
Cam rollers on engine carriage permit smooth forward and reverse travel.



Handles three different auger sizes by simple rearrangement of adjustment blocks. Two men do complete job in one hour.



Hydraulic skids and jacks "walk" drill into position. Unit moves forward, back, left or right under own power. Placement is exact. Recovery is higher.



COAL AUGER



Conveyor arrangement permits discharge to left or right. Conveyor can be turned around easily in the field. Narrow bench or restricted pitentry is no problem.

maximum recovery ...two-man crew

No matter how you mine it, 160,000 tons per year is a lot of coal...particularly if it's done with one piece of equipment and a two-man drilling crew. That's the kind of production being reported by users of Salem's big, rugged McCarthys. The only other piece of equipment on most of these jobs is ONE dozer and operator for face up and clean up.

Coal runs faster because the McCarthys move under their own power on skids and jacks...even in wet, muddy pits. Many operators keep right on drilling in ice and snow. They stop only when haulage roads become too bad for travel.

Add it up...a versatile drill; fast moves; high recovery rate; minimum equipment and lower initial investment...augered coal costs less with a McCarthy!

Ask your Salem distributor or us for complete facts. We'll send them immediately.

COWIN EQUIPMENT COMPANY, INC.
Birmingham 4, Alabama

WHITMYRE EQUIPMENT COMPANY
Bethel Park, Pa.

WILSON MACHINERY & SUPPLY CO.
Lexington, Kentucky

NIXON MACHINERY & SUPPLY CO.
Chattanooga 1, Tenn.

Nashville, Tenn.

RISH EQUIPMENT CO.
Bluefield, W. Va. Charleston, W. Va. Clarksburg, W. Va. Coeburn, Va.
Parkersburg, W. Va. Columbus, Ohio Youngstown 7, Ohio

Strip at a Profit

with this Page where other machines lost money

Let us send you records of such results —

Where Page Walkers made a losing job profitable — other cases where the owners increased their profits on operations which were making money.

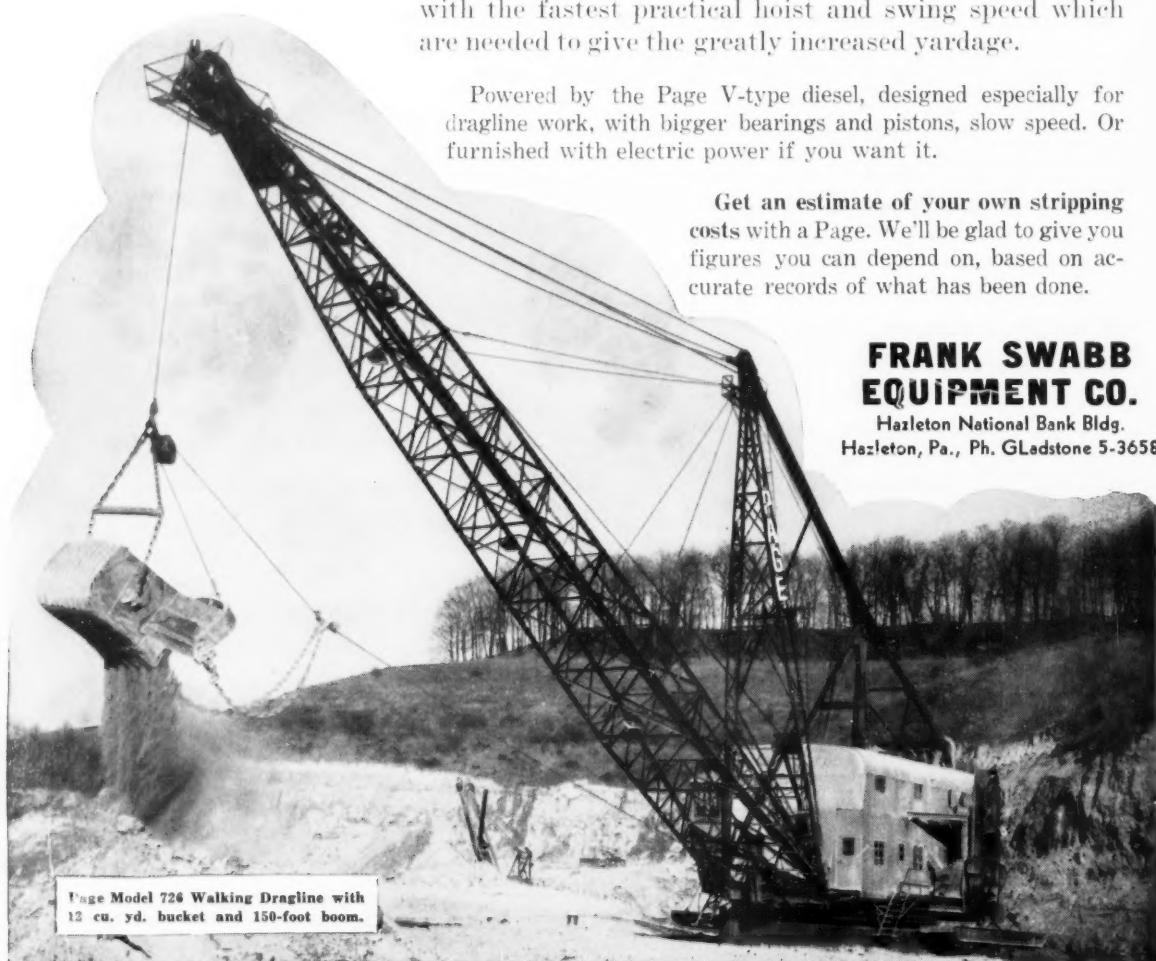
Page Draglines consistently out-perform larger but slower machines, in every kind of digging. And are built extra strong, are real work-horse machines that can stand up with the fastest practical hoist and swing speed which are needed to give the greatly increased yardage.

Powered by the Page V-type diesel, designed especially for dragline work, with bigger bearings and pistons, slow speed. Or furnished with electric power if you want it.

Get an estimate of your own stripping costs with a Page. We'll be glad to give you figures you can depend on, based on accurate records of what has been done.

**FRANK SWABB
EQUIPMENT CO.**

Hazleton National Bank Bldg.
Hazleton, Pa., Ph. GLadstone 5-3658



For High Production and Lowest Operating Costs --
PAGE WALKING DRAGLINES

Do You Know?

- Some day scientists will be able to design with engineering precision the new materials needed to perform under special sets of conditions.

When they are able to do this, the hit-or-miss approach can be abandoned and one of the biggest and most costly bottlenecks to the advancement of scientific accomplishments will have been eliminated.

This has to come, for there are no holes in the periodic table of elements. Materials for future automobiles, wall TV sets and rocket ships must be made out of the basic substances we now have at hand.

The process of designing a new material to fit a special purpose might well be called "molecular engineering." It will include manipulating the molecular structures of known substances to build in the qualities needed.

Great strides in this direction already have been made. An end-product in one case is familiar to every person who owns a pocket-sized radio. It is the transistor—the tiny, rugged, chunk of germanium that has replaced vacuum tubes in many jobs, especially in hearing aids.

Before scientists can go about an orderly engineering of materials having special properties, however, an enormous amount of information must be amassed. The very first step is to learn the properties of pure materials. These properties are controlled by the crystal lattice structure, they way the atoms join to form larger units. Any imperfection in the lattice structure, or an increase in the kinds and amounts of impurities, can change the material's nature.

Once such information is available for a large number of chemical mixtures and compounds, scientists can take more of a slide-rule approach to the design of specific materials to meet specific needs.

One storehouse for this kind of data is at the National Bureau of Standards in Washington, D.C. Scientists there are constantly working out the factors that affect the properties and behavior of materials.

Even more-critical work at the Bureau involves the development of measuring techniques. To assure valid results, these measurement methods must be able to guarantee the scientist that he is actually measuring what he wants to measure.

In advancing the art of molecular engineering, we foresee the Bureau contributing chiefly through development of "very fine methods to enable others to make the materials." These methods will include ways to prepare the material, to purify it, and to characterize its qualities through accurate measurements.

HERE AND THERE IN THE COAL INDUSTRY

- G. Albert Shoemaker has been elected president of Consolidation Coal Co., Board Chairman George H. Love announced in Pittsburgh this week. Mr. Shoemaker, formerly executive vice president, fills the vacancy left by A. R. Matthews, who died April 2. Dennis L. McElroy, formerly vice president in charge of operations, has been elected executive vice president.

Mr. Shoemaker, a native of Parkersburg, Pa., graduated from Pennsylvania State University in 1923 and followed an engineering career until 1930, when he joined Union Collieries Co. In 1945 he became vice president of one of Consol's predecessor companies. He was elected vice president of the Pittsburgh Coal Co. division of Consol in 1946, and later became president of that division. He was elected executive vice president of Consol in 1952 and became a director in 1956.

He is also president and a director of the Mathies Coal Co., an associate firm; a director of Dravo Corp.; Harmar Coal Co., National Potash Co.; Pitt-Consol Chemical Co., and North-Western Hanna Fuel Co. He is president and a director of the Western Pennsylvania Coal Operators Association.

Mr. McElroy, a native of Moundsville, W. Va., graduated from West Virginia University School of Mining Engineering, where he later served as professor of mining engineering, director of the School of Mines and director of industrial extension. He has been a vice president of Consol since 1947, first in charge of engineering and in recent years in charge of operations.

- C. William Davis was elected president of the Southern Coal Producers Association, succeeding Joseph E. Moody.

Mr. Davis, a native of Wind Rock, Tenn., received a law degree from

the University of Tennessee in 1948. He worked in Tennessee coal mines in his youth and while a student was understudy to the president of the Southern Appalachian Coal Operators' Association.

- Charles R. Nailler was promoted last week to vice president—operations of Consolidation Coal Co., Executive Vice President D. L. McElroy announced. For the last seven years Mr. Nailler has been president of Christopher Coal Co., Morgantown, W. Va., a Consol operating subsidiary. Mr. Nailler graduated from Case University in 1932. The next year he joined Hanna Coal Co. in St. Clairsville, Ohio, becoming general manager of mines when Hanna Coal was acquired by Consol. He became vice president of Christopher Coal in 1946. He will continue to make his headquarters in Morgantown.

Harold Suter, who has been vice president of Christopher Coal since 1956, succeeds Mr. Nailler as president. Mr. Suter was superintendent of Pursglove Mining Co. when it was acquired by Consol in the early 1940's. He later became general superintendent of Christopher.

- Freeman Coal Mining Corp. announces the retirement of John R. Foster as superintendent of the Orient No. 2 mine. He was succeeded by Arlie Cook, formerly mine manager. Arduino Castrale was named superintendent of Freeman's Orient No. 5 mine, which is expected to reach production in mid-1960.

Mr. Foster was superintendent of Orient No. 2 mine on March 22, 1928, when it set a world record by hoisting 15,174 tons in one 8-hour shift, a mark that still stands.

- William H. Ritter was elected to his 22nd consecutive term as president of the Reitz Coal Co.



Cybernetics Will Give Us Man Made Man

• While all animal action is automatic response to external stimuli, the response is not so complicated, physiologically, as was generally supposed. Of all news made through recent use of the knowledge of cybernetics, the most important is that of the possible development of synthetic man.

The notion of creating a semi-human machine, that notion being the beginning of cybernetics, goes back about 200 years. The cybernetics we know today has been created in the last 20 years; primarily beginning through a desire for better military weapons in World War Two. A more recent, and a more humanitarian group, of cybernetists is working on ways in which the new knowledge can be used to benefit mankind, not destroy it.

In the military, cybernetics contributed to the development of ballistic missiles and to rockets that are made "home" on moving targets. In industry, cybernetics has given us machines with enormous memories and abilities. These new man-made machines maintain homeostatic equilibrium with goal seeking desires so strong they alter their own material make-up to suit pressing conditions. In seeking their goal, always pushing to-

ward the goal, through trial and error, they find the best way, thus exhibiting some features of the human brain.

In action in the military, cybernetics is seen in automatic aiming of anti-aircraft guns used by our Army and our Navy. Radar spots the target and feeds information to a computing machine which automatically calculates the direction and speed of the aircraft. If the target is missed, a second radar notes the miss and feeds corrective data to the computer which feeds information for reaiming and a second shot is fired on target. In the color printing industry, cybernetics mechanism with an electric eye scans presses for delicate alignment in color register, makes proper alignment of the paper for better register, thus correcting its own mistakes.

There are now semi-automatic and fully automatic manufacturing plants in other industries. As cybernetics mechanisms become more skilled, the closer we are coming to complete automatic industry, with machines taking orders from computers and sending progress reports back to the computers that will modify operations as needed.

JEFFREY **UNIVERSAL COAL CUTTERS...**

cut any place in the seam from 14" below floor level to 13' above

Jeffrey Universal Coal Cutters (AC or DC) are designed to meet various mine conditions and are available for working in mines with seam heights ranging from three feet to thirteen feet.

Jeffrey cutting machines mounted on rubber tires have a cutting head which can rotate and is instantly adjustable in height. It can be swung either from the turret on a long radius or from the cutter head on a shorter radius. This permits bottom or top cutting any place in the seam or for making a shear cut right or left of center.

These machines feature the latest developments in coal cutting efficiency to give more workability without breakdowns... important advantages in getting higher production.

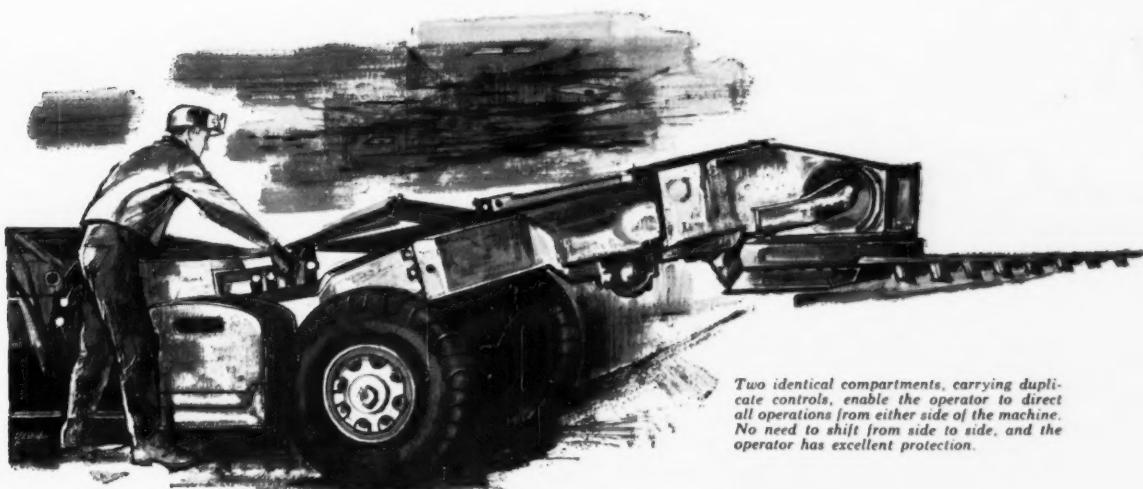
ADVANTAGES

1. Full hydraulic control of all operations except cutter chain drive
2. Easy to operate and control—giving quick response from fingertip controls
3. Built for safety and speed
4. Designed for hard cutting
5. Constructed to stand up under rugged going
6. Have maximum flexibility and low cost operation—no operating time wasted
7. More smooth cuts per shift
8. Operating and control mechanisms are accessible for maintenance

THE JEFFREY MANUFACTURING COMPANY
969 North Fourth Street
Columbus 16, Ohio



MINING • CONVEYING • PROCESSING EQUIPMENT... TRANSMISSION MACHINERY... CONTRACT MANUFACTURING





U. S. Steel's new Maple Creek Coal Preparation Plant. Coal from the Frick District's Maple Creek Mine and five other up-river mines is being processed at the plant. The 10-foot diameter steel-enclosed conveyor tube frames the 800-ton per hour washer and blending bin in the background.

Maple Creek Coal Preparation Plant of the United States Steel Corporation

United States Steel's Maple Creek Coal Preparation Plant was officially opened May 3 when more than 250 business, government, union and civic leaders and representatives of the press, radio and television visited this new coal processing facility.

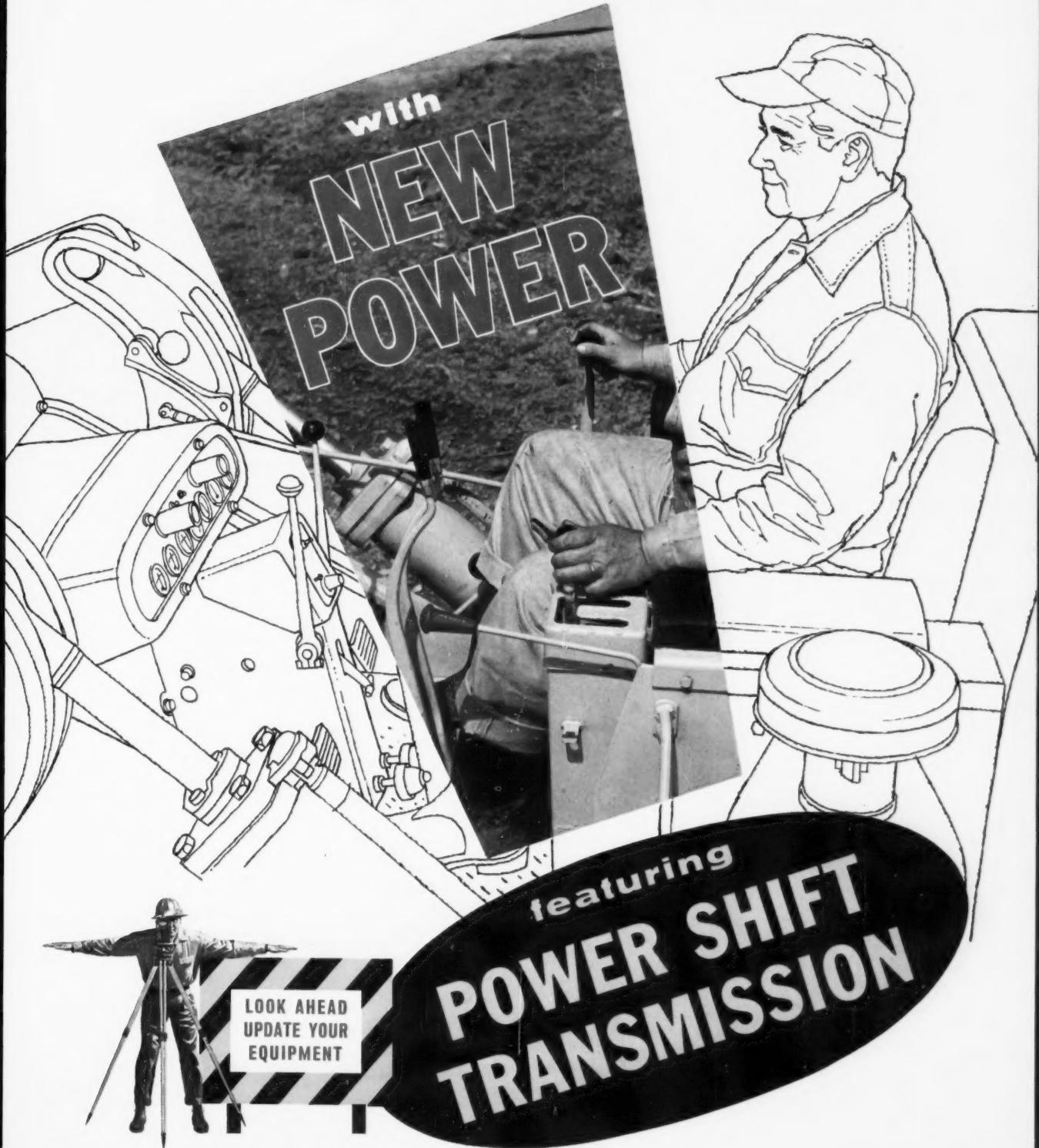
Located 16 miles up the Monongahela River from Pittsburgh, in New Eagle Borough, Washington County, Pa., R. C. Beerbower, Jr., general superintendent of the Coal Division's Frick District, said the preparation plant is one of the most modern in the country.

The 10 story-high plant has the capacity to wash raw coal at the rate of 800 tons per hour.

Coal mined at the district's Maple Creek Mine, together with coal from the Bridgeport, Colonial, Karen, Leisenring and Maxwell Mines, will be processed in the new preparation

(Continued on Page 17)

Your CATERPILLAR Dealer ANNOUNCES
TWO NEW TRAXCAVATORS



NEW

977H

**2½ cu. yd. • 150 HP
36,270 lb.**



NEW

955H

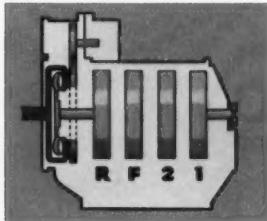
**1¼ cu. yd. • 100 HP
25,155 lb.**



THE TRAXCAVATORS THAT NEVER STOP

Power Shift Transmission...Live Action Hydraulics

**make new Series H TRAXCAVATORS the most productive
loaders in their classes**



These new Traxcavators are already earning the reputation as THE MACHINES THAT NEVER STOP. Regardless of loads imposed, the tracks can never use all the total power available—the bucket never stops—the tracks never stop moving, crowding the load.

This cost-cutting, production-boosting development results from a combination of Caterpillar's power shift transmission, live-action hydraulics and a new powerful Caterpillar-built Diesel Engine.

The Cat power shift transmission makes possible split-second speed and directional changes and provides two forward and reverse speeds in each work range.

Live action describes a new hydraulic system that keeps the bucket moving through tough material, creates a loading cycle of constant motion. You get more lifting capacity, faster bucket speeds, greater crowding action . . . far more production than ever before.

We invite you to learn the complete story on Caterpillar 977H and 955H Traxcavators *now!* See us for all the facts. Ask about convenient financing terms. Ask for the demonstration that will change your whole idea of track-type loaders and excavators.

NEW POWER

Completely new, turbocharged Cat Diesel Engines. The 977H Series develops 150 HP, 50% more powerful; the 955H, 100 HP, 43% more powerful than former models. Dry-type air cleaners can be serviced in 5 minutes.

NEW POWER SHIFT TRANSMISSION

Designed by Caterpillar specifically for Traxcavators. Power shift lever instantly selects two forward, reverse speeds; high-low range lever provides four speeds forward—four reverse.

NEW OPERATING EASE

You sit up high where you can see the bucket, even in full digging position. In-seat starting, dual throttle controls, automatic bucket positioner and kickout provide faster, easier operation.

NEW CAPACITY

The 977H has 2½ cu. yd. bucket; the 955H has 1½ cu. yd. bucket. Full selection of buckets, forks, dozers, rippers, etc. available.

NEW HEAVY-DUTY UNDERCARRIAGE

Traxcavators have the strongest undercarriages in their classes. Full box-section roller frames. Lifetime lubricated rollers with patented floating ring seals never need servicing.

NEW LIVE ACTION HYDRAULICS

Greater lifting capacity and faster bucket speeds come from higher capacity hydraulic systems. Live action means the bucket is alive with power and speed in all materials.

High production with built-in dependability—by

CATERPILLAR

Caterpillar, Cat and Traxcavator are Registered Trademarks of Caterpillar Tractor Co.

NAME THE DATE... we'll demonstrate

**the new
Series H
Traxcavators**



YOUR CATERPILLAR HEADQUARTERS

BECKWITH MACHINERY COMPANY

6550 Hamilton Avenue, Pittsburgh, Pa.
Old Town Road, Clearfield, Pa.
361-369 Congress St., Bradford, Pa.
1356 E. 12th St., Erie, Pa.
Route 219 North, Somerset, Pa.
Buckhannon Pike, Clarksburg, W. Va.

OHIO MACHINERY CO.

6606 Schaaf Road, Cleveland, Ohio
930 Kinnear Road, Columbus, Ohio
2807 Reynolds Road, Toledo, Ohio
U.S. Route 250, Cadiz, Ohio
4000 Lake Park Road, Youngstown, Ohio

WALKER MACHINERY CO.

Route 60 East, Belle, W. Va.
4010 Emerson Ave., Route #2, Parkersburg, W. Va.

CM-10



**TELL ME MORE ABOUT THE
NEW SERIES H TRAXCAVATORS!**

Send literature on the
 977H 955H
 Have a representative call.

Name _____

Address _____

City _____ State _____

(Continued from Page 12)

plant. The coal is then transported to the Clairton Works, for conversion into coke for use in the Corporation's basic steel plants in the Pittsburgh District.

Coke made from properly cleaned coal, Mr. Beerbower pointed out, is lower in ash and sulphur and is a contributing factor in producing more and better iron in the blast furnaces.

Break-in operations are now in progress at the Maple Creek Mine. Located adjacent to the coal preparation plant, the mine will be equipped with the most modern continuous mining equipment. A personnel service shaft, refuse shaft, shop installation, and a slope for handling supplies and equipment are under construction.

Presently, the preparation plant is shipping coal to the Clairton Works. As the remaining coal reserves in Fayette County are depleted, the Maple Creek Mine operation will be increased.

Since the preparation plant was to be located within the New Eagle community, careful consideration was given to the architectural design of the building during the planning stage. Consequently, it was decided to install louvers instead of windows in all the buildings, and also use reflective paint on all outside metal structures essentially to improve appearance.

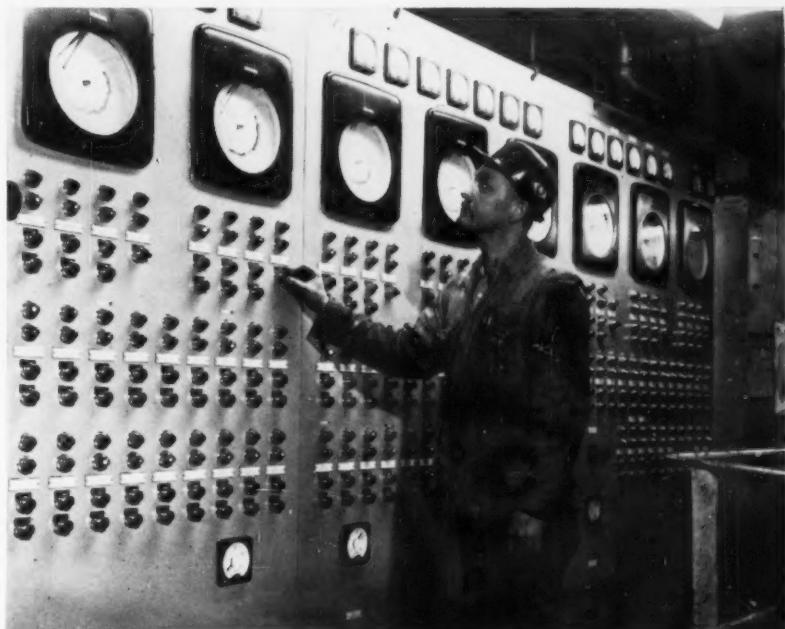
Another innovation was the installation of steel conveyor tubes replacing the conventional open galleries and necessary structural supports. The tubes not only enhanced the plant's appearance, but more importantly offered a number of other features such as water outlets in each tube facilitating washing and clean-up, no obstruction to cause dust accumulation, overhead ventilators and good lighting.

Measures were taken during the design stage to reduce the noise level in the plant. In connection with this important community responsibility, galvanized sandwich siding was installed on all surface facilities; rubber pads are mounted between

the rails and ties on the trestle to reduce wheel chatter and anti-friction bearing mine cars and electric locomotives reduce yard noise.

The possibility of dust developing

during the cleaning operation were eliminated with the installation of a wet coal cleaning process. All possible locations where dust might become a problem have been enclosed



This central control panel flashes signals that operates all the washing plant units, blending bin and refuse conveyors at U. S. Steel's new Maple Creek Coal Preparation Plant. The control panel is one of the most integral components at the plant. Here, John Stump, cleaning plant operator, clocks the fine coal system recorders.



An innovation in the construction of U. S. Steel's new Maple Creek Coal Preparation Plant was the installation of conveyor tubes. The 40-foot long steel tube sections were assembled with decking, walkways and handrails by the American Bridge Division before arrival at the construction site. Coal on this belt is enroute from the blending bin to the washing plant.

and approved dust collection systems installed.

To assure longer life in abrasive and corrosive applications and reduce maintenance and operating costs, more than 300 tons of high alloy steels were used in the construction of the preparation plant.

Stainless steel, austenitic non-magnetic U. S. S. Cor-Ten and "AR" steels were used in launderers, chutes, screen surfaces and housing support structures.

Production of the new plant will supplement that of the Robena washer located at Greensboro, Pa.,

to assure U. S. Steel's Pittsburgh District basic steel plants of a steady supply of high-grade metallurgical coal for coking purposes.

Background Information

Coal from the Maple Creek Mine is dumped from drop bottom cars into a 700-ton raw coal bin and then screened and crushed to minus five inches. Coal from the up-river mines arrives at the plant by barge, unloaded into a 400-ton raw coal bin and similarly screened and crushed.

From the raw coal bins the coal is conveyed to the 8000-ton blending bin. After blending, the coal is transported by a belt conveyor to the top of the preparation building where it is deposited into raw coal bins. The coal is then directed onto vibrating screens where it is separated into 5x1-4 inches to 1-4x.0 inches.

Coal above a quarter-inch in diameter is then introduced into a huge cone containing a fine sand and water mixture, the specific gravity of which is sufficient to float coal while the heavier impurities sink to the bottom and are removed from the system. Vibrating screens then remove the sand and water from the coal and refuse.

The coal "fines"—less than a quarter-inch—are deslimed in bowl desilters at 100 mesh. The plus 100 mesh coal is cleaned on concentrator tables while the minus 100 mesh coal is cleaned separately. The clean coal is then filtered, mixed with the coarse coal and directed by conveyor to the river tipple where it is loaded into barges. The fine refuse is dewatered in a spiral classifier, deposited on a belt system and transported to a refuse bin. Here, refuse is loaded into mine cars and conveyed underground to a slate bin at Ginger Hill. The refuse is then skip-hoisted to a bin on the surface and hauled to the disposal area.

Refuse slurry from the 140-foot thickener is pumped back into the mine through a five-inch pipeline and up a bore hole to the surface where it flows by gravity to a settling pond.



Clean black diamonds are inspected by Les Anderson, general foreman, at U. S. Steel's new Maple Creek Coal Preparation Plant. Coal over 1½ inch is directed to the crusher as it passes over this vibrating screen, while coal under 1½ inch is directed to the clean coal belt and conveyed to the river loading tipple.



Loaded mine cars emerge from the portal. Now in a break-in period, the mine is soon to be equipped with the most modern continuous mining equipment.



Coal from five Frick District's up-river mines arrives in barges and is unloaded at U. S. Steel's new Maple Creek Coal Preparation Plant. After the coal is unloaded, it is transported by belt in this 10-foot diameter steel conveyor tube, seen at right, to the 8000-ton blending bin prior to processing.



Washed coal at U. S. Steel's new Maple Creek Coal Preparation Plant is loaded into barges and transported to the Clairton Works where it is converted into coke for the Corporation's Pittsburgh District blast furnaces.



Assembled 4500 Vicon tips slowly onto the wooden ramp ready for descent to the country road leading to the McGinness Brothers strip mine.



Great stability of the Vicon is evident as it rides securely in an apparently precarious position on the rail car.

Only 18 Hours Required for Vicon Assembly; Expect 100% Increase in Coal Mining Tonnage

One would suspect that shipment and assembly of a giant 200-ton Manitowoc 4500 Vicon Dragline would be a complicated and time consuming project. When McGinness Brothers recently ordered delivery of a Vicon for their 500 acre strip mine near Bolivar, Ohio, the big machine was shipped, assembled and ready to go in just five-and-one-half days (including four days enroute from Manitowoc, Wisc.)

All components were loaded and shipped in five railroad cars and the actual assembly time took only 18 hours. Once assembled, the unusual stability and low ground bearing pressure of the Vicon permitted it to be ramped off the rail-car and, under its own power, driven 1½ miles up and down grades over country roads to the job site.

Ease of rail shipment was greatly facilitated as the Vicon's 11 major components can be readily taken apart and loaded. In addition to the mast assembly, the lead car carried 2 crawlers, while the 90 ton main

house cab, minus the fuel tank, operator's cab and cab extension, was placed on a deep-well car. Small parts, the fuel tanks, operator's cab and cab extension, moved on a third car with the fourth carting several aluminum boom sections and bridle cables. Number 5 car hauled the all steel dragline boom butt section and the high-strength aluminum alloy boom top section.

Rapid assembly of the Vicon was accomplished with the 2000 pound fuel tank being secured first, then the pilot house, connection of control hoses, platform extension, and installation of the radiators. Next, the mast was connected. By using the mast as a temporary boom, the Vicon was now able to lift and place its own crawlers and boom—an important time-saving feature. To effect this operation, one end of the carbody was jacked and blocked and the mast was used as a temporary boom to lift and place the complete crawler assembly for one side. The other crawler assembly was placed in similar fashion.

At the working site, the Vicon will be equipped with a 100-foot long boom and a 7-yard bucket, and used to strip overburden from coal seams. McGinness Brothers are currently operating one 3-yard dragline and one 2-yard shovel with monthly production averaging 6000 tons. When the Manitowoc Vicon begins mining, tonnage is expected to increase between 80 and 100 per cent.



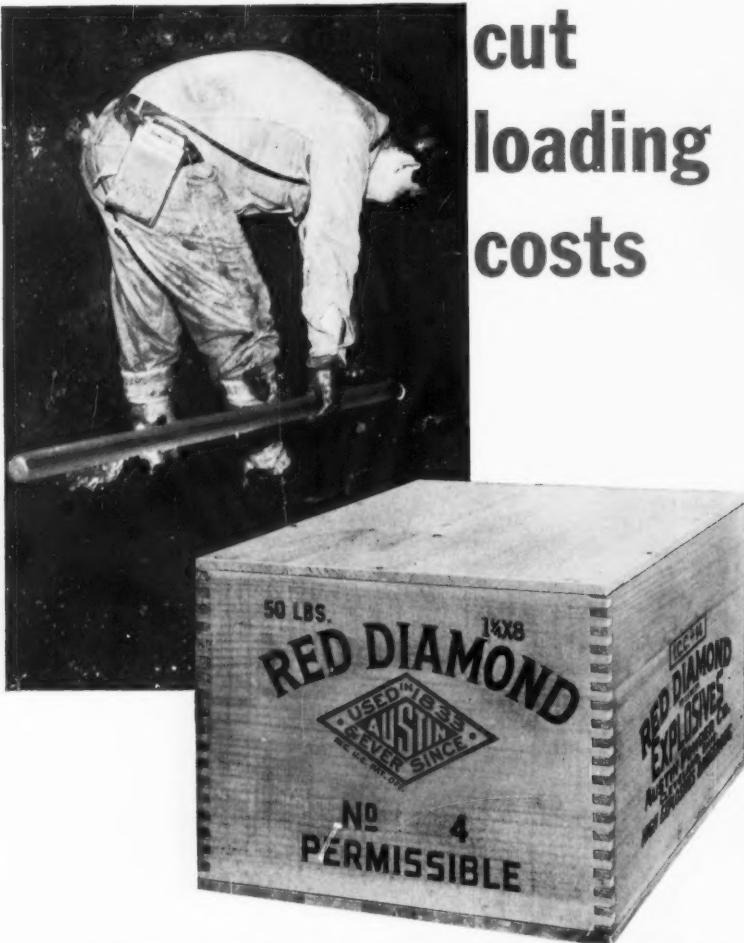
Pictured is the Vicon as it starts to travel on the 20 foot wide road to the mining location.



General overall views of the Vicon on the special deep-well railroad car. Photos show workmen making final adjustments just prior to moving the Unit.

Austin Permissibles

**cut
loading
costs**



Loading costs and cleaning expense are important factors in the profit picture of many deep mines. And, they are factors that can be closely controlled through use of the right permissible dynamites.

Austin produces permissibles which solve virtually every problem connected with production of coal. They are available in speeds and strengths that meet such varying conditions as heavy binders, hard rock, thin seams, excessive water, etc.

Your Austin representative will gladly survey your present operation and show you how the correct type of permissible can save you time and money. Call him today or write Austin Powder Company in Cleveland.

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explosives ♦ low grade ammonium nitrates ♦ primers ♦ blasting supplies
detonating fuse and connectors ♦ AP drill heads ♦ mine tools



ROBERT H. BURGAN, JR.

- Appointment of Robert H. Burgan, Jr., as Mid-Atlantic regional manager, Davey Compressor Co., Kent, Ohio, is announced by J. T. Myers, vice president.

Mr. Burgan was formerly general manager, Lutherville Supply & Equipment Company, Lutherville, Md. In his new post he will direct sales and service in Maryland, Virginia, Delaware, Southeastern Pennsylvania and Southern New Jersey on the entire Davey line. The latter includes portable air compressors, "Auto-Air" truck-mounted compressors, tank-mounted and industrial stationary compressors, mobile machine shops, field service units, air tools and rotary drills.

Mr. Burgan's responsibilities also include liaison work with federal purchasing and engineering offices. He will make his headquarters at 5631 Purdue Ave., Baltimore.

* * *

- Frank Nugent has been elected president of the Mid-West Coal Producers Institute, Inc., succeeding S. L. Jewell, who resigned. Mr. Nugent is president of Freeman Coal Mining Corp., Chicago, a vice president of General Dynamics Corp., and a director of NCA. Succeeding Mr. Nugent as first vice president of the Mid-West group is H. C. Livingston, president, Truax-Traer Coal Co., Chicago.

State Equipment Company Sales Meeting



• State Equipment Company, distributors of International tractors, Hough Payloaders, and other lines of earth-moving equipment in Pennsylvania, New York and Vermont, held a sales meeting at Skytop, Pennsylvania, April 4 through 6. A professional sales promotion man, Ralph Myrick, conducted the sales training sessions that were supplemented by representatives from the several manufacturers whose lines are represented by State.

More than 50 individuals were present for the three day meeting, unanimously acclaimed as successful. A feature of the meeting was that two father and son combinations were present. Mr. H. E. Hemingway, Manager of the State branch in Pittsburgh, was present as was his son, Tom Hemingway, salesman in the Syracuse branch. Loren Samsel, salesman in Kingston, was also present with his son, Loren Samsel, Jr., a new salesman in the Pittsburgh territory.

State Equipment Company anticipates a fine new selling year and is particularly optimistic because of the excellent new model tractors recently introduced by International Harvester Company and the Frank G. Hough Company.

• Dr. Charles J. Potter has been elected to his 13th consecutive term as president of Rochester & Pittsburgh Coal Co., Indiana, Pa. O'Donnell Iselin, New York City, was

named chairman of the board. Other officers of the company reelected last week are H. Vernon Fritchman, Indiana, executive vice president and general counsel; G. P. Remy, New York, vice president; Peter Iselin, New York, secretary and assistant treasurer and Walter E. Scholes, Indiana, treasurer.



International Drott TD-15 Four-in-One loads truck with processed coal at bituminous strip mine of Morris Enterprises near Owensboro, Ky. The coal, known as West Kentucky No. 6, is shipped to a utility plant. The Four-in-One is also used for cleaning coal, maintaining haul roads and stockpile loading. An International TD-24 is employed for stripping and benching in the operations that remove 35 feet of overburden to reach an average depth of 3½ feet of coal.

**it's 2:45 a.m.
but the *Highway* crew is on the job**

The country sleeps. But the Highway service truck is on the road. Regular Highway service hours at Pittsburgh, Du Bois, Erie are 8 a.m. to 3 a.m. But, in emergencies, Highway works 'round-the-clock.

Fast service is expertly and economically handled by 87 factory trained mechanics. 32 service truck crews make repairs right on your job.

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Lowers the boom on mining costs!



Lima 44 at Shawville Coal Co., Shawville, Pa.

Perfect matching of equipment to the job holds the sure key to reduced mining costs.

And—proper equipment selection is a task your Highway representative will be happy to share with you.

May we suggest? . . . phone him today!

A-1679A

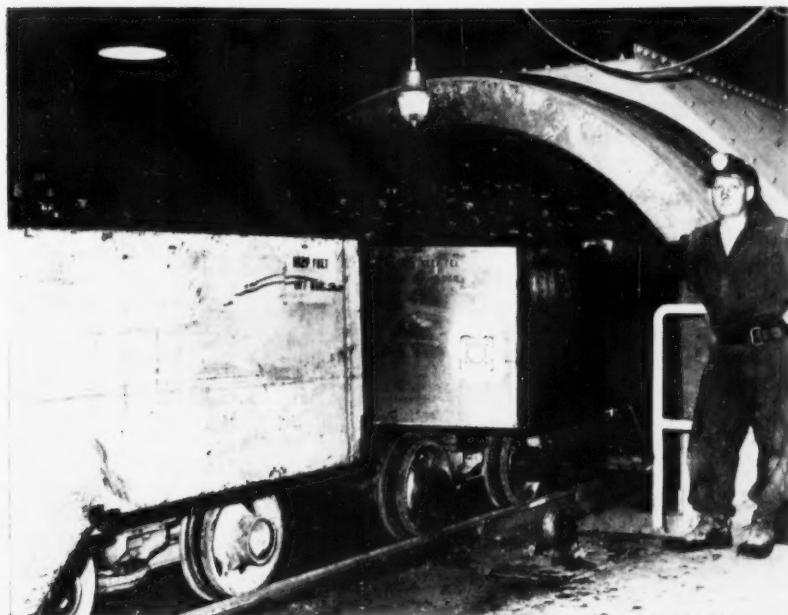


Highway

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Allis-Chalmers • Master • Lima • Thor • Heltzel • Gar Wood
Jaeger • Buffalo-Springfield • Ottawa
Rogers Trailers • M-R-S • Lippmann Crushers



During a year-and-a-half's service in a West Virginia coal mine these aluminum mine cars showed no sign of corrosion and proved they could take rugged day-to-day use. Made by Watt Car and Wheel Company, Barnesville, Ohio.

- This is a good example of how aluminum mine cars can absorb impact without suffering any permanent deformation.

The dumping characteristics of the mine cars today are still as "clean" as the day they went into service. Normally the rust and corrosion in steel cars used in underground operations builds up with coal and must be chipped out periodically.

The aluminum mine cars' ability to resist corrosion from the sulphur content of coal and to withstand rugged service indicates that the life expectancy of aluminum cars should be much longer than steel ones, and that maintenance should be almost negligible.

Another important advantage of cars in underground operations is that aluminum is non-sparking, and thus the cause of mine explosions brought about in this manner is eliminated.

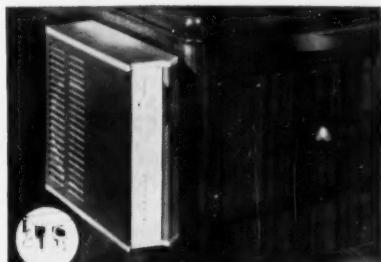
Each of the aluminum cars is 26 feet long, seven feet wide and four feet deep. The weight of the cars is 7,580 pounds, compared with 11,680 pounds for steel cars of the same size.

The cars are made of alloy 6061-

T6, mostly of one-half-inch plate. The 90 parts for each car were assembled and tack welded.

Sixty aluminized steel carriage

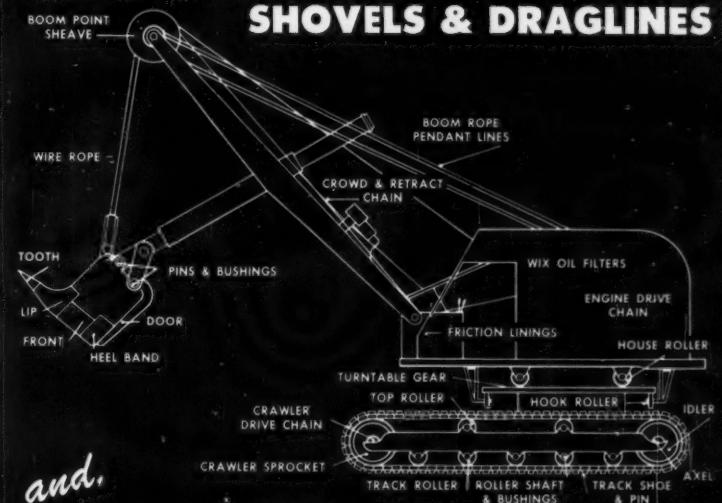
bolts were used to fasten the steel trucks and draft gear to the body of each car.



- Deskside intercom, introduced here by Talk-A-Phone Co., Chicago, intercommunications manufacturer, offers more efficient use of office work space by providing versatile placement of the units.

A bracket attachment, optional with all new Talk-A-Phone office and industry models, makes it possible to place the intercom on the side of a desk, on a wall, table, or in other positions, thus freeing additional work space. Manufactured by Talk-A-Phone Co., 5013 N. Kedzie Ave., Chicago 25, Ill.

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JOY EQUIPMENT—REBUILT

- 3—Joy 14BU Loaders, low pedestal, 7A.E. '56 & '57.
- 6—Joy 14BU Loaders, medium pedestal, 7RBE.
- 1—Joy 14BU & 7CE high pedestal loader.
- 4—Joy 14BU 3PE Loaders.
- 2—12BU10E Joy Loaders complete with Piggy-backs.
- 2—Joy 12BU Loaders, 9E, latest type.
- 1—Joy 20BU Loader, latest type.
- 4—Joy 11BU Loaders, latest type.
- 1—Joy 8BU Loader, 34" overall height.
- 2—Joy 8BU Loaders, 220 volt AC.
- 1—Joy curved Bar Head, complete.
- 6—Reliance 24-J Motors, 71/2 H.P.
- 4—Reliance 38-J Motors, 10 H.P.
- 20—9-J Motors, 4 H.P.
- 2—Goodman 660 Loaders on Crawlers 440 volt DC, like new.
- 1—Goodman 660 Loader on Crawlers, excellent 250 V. DC.
- 1—Goodman 665 Loader on Crawlers, latest type 250 V. DC.
- 1—Goodman 865 Loader 26" hi. Rebuilt. 250 V. DC.
- 4—Joy SSC Shuttle Cars, Rebuilt.
- 4—Joy GSC Shuttle Cars, rebuilt, latest type.
- 1—Joy SBC Shuttle Car, Excellent.
- 2—Joy 32E9 Shuttle Cars.
- 2—Joy 32E10 Shuttle Cars, rebuilt.
- 2—Joy 32E15 Shuttle Cars, rebuilt.
- 4—Joy 32E16 Shuttle Cars, rebuilt.
- 10—Joy 42E16 Shuttle Cars, rebuilt.
- 2—Joy CD-22 Drills, on rubber, like new.
- 6—Joy T-2-5 low pan Crawler Trucks, rebuilt.
- 1—Joy T-2-6 low pan Crawler Truck with reel.
- 2—Joy T-1 Standard Crawler Trucks, 220 AC.
- 1—Joy T-1 Standard Crawler Truck, 250 DC.
- 2—Goodman low pan Crawler Trucks, like new latest type.
- 4—Joy 11-B Cutting Machines, like new, 35 and 50 H.P.
- 1—Joy 7-B Cutting Machine, like new, 250 volt DC.
- 2—Goodman 212 Cutting Machines, 19" high.
- 4—Goodman 312 Cutting Machines, 17" high.
- 3—Goodman 412 Cutting Machines, 19" high.
- 1—Goodman Machine on Crawler, 31" high. All hydraulic.
- 6—Goodman 512 Machines with Bugdusters.
- 6—Goodman 612 cutting machines, 250 and 500 volt.
- 1—Lee Nurse low vein Machine Carrier on rubber.
- 1—Jeffrey 70 URB rubber tired Cutter. Universal head, perfect condition.
- 1—Goodman 2100 rubber tired Cutter, Universal Head, like new.
- 3—Joy 11RU Rubber Tired Cutters with bug-dusters, Universal heads, dual tires, like new, 250 V. DC.
- 2—Joy 10RU rubber tired cutters Universal head, 220/440 volt AC, perfect.
- 4—Joy 10RU rubber tired Cutters, Universal Head, 250 V. DC.
- 6—7AU's on track, Universal head.
- 2—Jeffrey 29UC Cutting Machines, Universal head, cuts anywhere in seam, 38" high, on Crawlers, 250 volt DC.
- 1—Jeffrey 29LC on Crawlers, rebuilt.

LOCOMOTIVES

- 1—Goodman 6 ton, 93-A, 27" high, armor plate frame.
- 1—Jeffrey 15 ton MH-77 Locomotive, Armor Plate frame.
- 3—Jeffrey, 13 ton, type MH-110, 36", 42", 44" ga.
- 2—Jeffrey, 10 ton, type MH-78, 42" & 44" Ga.
- 2—Goodman 8-30 and 10-30 Locomotives, 26" above rail.
- 1—Jeffrey MH-121, 4 ton, like new, with reel, 24" overall height.
- 2—Jeffrey, MH-150, 6 ton, 26" overall height, rebuilt with reel.
- 12—Jeffrey, 6 ton, type MH-88, 42", 44" and 48" Ga.
- 4—Jeffrey, 8 ton, type MH-100, 2½" armor plate frames.
- 1—Jeffrey, 6 ton, type 2186, 22" above rail.
- 2—Jeffrey, 4 ton, type MH-96, 42", 44" and 48" Ga.
- 1—G. E., 4 ton, type 825 Locomotive, 22" high. 10—G.E., 6 ton, types 801, 803, 821 Locomotives, 42", 44" and 48" Ga.
- 1—G.E. 8 ton, type 822 Locomotive, 44" Ga.
- 3—G.E. 10 ton, type 809 Locomotives, 42", 44", 48" Ga.
- 1—Goodman 91A Locomotive, 8 ton, 26" overall height.
- 2—Goodman, type 33, 6 ton, 44" and 48" Ga.
- 3—Westinghouse, type 902, 4 ton, 42" and 48" Ga.
- 2—Atlas Battery Locomotives, 36" Ga.
- 1—Ironton Battery Locomotive, 4 ton, 24" high, excellent, with charger.
- 2—Westinghouse, type 904, 6 ton, 44" and 48" Ga.

- 1—Atlas Trolley Locomotive, 4 ton, 24" high.
- 2—Westinghouse, type 906, 44" and 48" Ga.
- 2—Westinghouse, type 907, 10 ton, 44" and 48" Ga.
- 8—Jeffrey MH-78 Locomotive Units, cheap.
- 4—Jeffrey MH-88 Locomotive Units, real bargains.
- 6—Jeffrey MH-100 Locomotive Units, reasonable.
- 3—Plymouth Diesel Locomotives, 8 and 10 tons, 42" and 44" Ga.

Locomotive Trucks and Spare Armatures for all the above.

TIPLLE EQUIPMENT

- All steel 5 track Tipple, new 1957, complete with washer, silo, oil treating system, all bolted construction.
- 1—Complete Five Track Tipple with Washers and Air Tables.
- 2—Complete Tipplers, 3 and 5 track, steel and wood.
- 3—Cleaning Plants, 1 Ea. McNally, Roberts and Schaefer, Jeffrey, Washers and Airflow Tables.
- 4—Complete Aerial Trams for coal or refuse.
- 3—Complete Rope and Button Lines.
- 2—Monitor Lines complete with Drums, excellent.
- 1—Allis-Chalmers 5' x 12' Rippflow Vibrator.
- 1—Allis-Chalmers 4' x 12' Low-Head Vibrator.
- 1—Robins Gyrex Vibrator 4x10.
- 10—Belt and Apron type Loading Booms.
- 6—Shaker Screens.
- 1—Robins Car Shakeout.
- 20—Crushers, various sizes—Jeffrey McClanahan & McNally.
- 4—Mine Scales, 10 & 20 tons.
- 5—Truck Scales, 25 to 40 tons, late type.
- Feeders, Belt and Drag Conveyors, Car Retarders, etc.

CUTTING MACHINES

- 2—Joy 10RU rubber tired cutters, Universal head, 220/440 volt A.C. Perfect.
- 4—Joy 10RU rubber tired Cutters, Universal Head, 250 V. DC.
- 3—Joy 11RU, rubber tired Cutters, 250 V. DC.
- 1—Goodman 2410 rubber tired Cutter Universal Head, new 1956, Excellent.
- 2—Jeffrey 29UC Universal Machines on Crawlers, 1—Goodman on Crawlers, 31" overall height.
- 3—Baby Goodman 212's, rebuilt, 250 Volt DC.
- 7—Goodman 212 Cutting Machines, 19" high.
- 4—Goodman 312 Cutting Machines, 17" high.
- 3—Goodman 412 Cutting Machines, 19" high.
- 6—Goodman 512's with Bugdusters, like new.
- 4—Goodman 512's, rebuilt, or as removed from service.
- 6—Goodman 612's—250 & 500 V.
- 3—Goodman 112's 220/440 volt AC.
- 1—Joy 7-B Cutting Machine, 250 volt DC.
- 4—Joy 11B Cutting Machines, rebuilt. 35 and 50 H. P.
- 6—7 AU's, on track, Universal head.
- 10—Goodman 12AA's and 112AA's, 250 volt DC.
- 2—Goodman 324 Slabbers.
- 2—Goodman 724 Slabbers.
- 2—Goodman, 824 Slabbers.
- 6—Jeffrey 35L's, like new, 17" high.
- 2—Jeffrey 35L's on low vein trucks.
- 2—Jeffrey 35L, 220/440 AC.
- 3—Jeffrey 35BB, 220/440 AC.
- 15—Jeffrey 35B's and 35BB's, 250 V. DC.
- 2—Jeffrey 29B's on track.
- 10—Jeffrey 29C's, track mounted.
- 2—Jeffrey 29L's on Crawlers, Excellent.
- 3—Sullivan CE7, 220 volt AC.

CONVEYORS

- 1—Robins 36" tandem drive, with or without structure.
- 1—Jeffrey 52-B tandem drive 30" Belt Conveyor, 1000'.
- 1—Joy 30" Underground Belt Conveyor, Excellent.
- 1—Goodman 97-C, 30" tandem drive.
- 1—Goodman 97-C, 26" Conveyor, 1,000' long.
- 1200—Robins 36" Underground Structure like new. 1,000'—Conveyor Belt 42".
- 4,000' Conveyor Belt 36".
- 4,000' Conveyor Belt 26".
- 8—Jeffrey 61AM 12" Chain Conveyors, 300'.
- 2—61EW Elevating Conveyors.
- 2—61WH 15" Room Conveyors, 300'.
- 2—Joy 15" Room Conveyors, 300'.
- 2—Joy 20" Conveyors, 300'.
- 4—Joy Ladel UN-17 Shakers.
- 10—Goodman G-12½ and G-15 Shakers.
- 1,000' Goodman 18" Flat Belt Conveyors, tandem drive, any length. Perfect.

CONVERTERS AND DIESEL PLANTS

- 1—300KW Portable Rectifier, 3 car unit, excellent.
- 2—500KW G. E. Stationary Rectifiers.
- 4—1,000KW Stationary Rectifiers.
- 2—100KW, G. E. TCC-6's, 275 volt, Rotary Converters.
- 1—150KW, 6 phase, Allis-Chalmers Rotary Converter, 275 V. DC.

- 1—150KW, G. E. HCC-6, 275 v., Rotary Conv.
- 2—200KW G.E. HCC-6's, Rotary Converters, 275 V. DC. Steel Frames, Newly rewound.
- 3—300KW, G. E. HCC-6's Rotary Converters, 275 V. DC, like new.
- 2—300KW Westinghouse, 6 phase, Rotary Converters, 275 volt DC.
- 2—500KW Westinghouse Rotary Converters, 275 volt DC.

- 2—200KW Westinghouse Rotary Converters, 275 V. DC. Newly rewound.
- (all the above with 6900/13000 and/or 2300/4000 primary transformers)

- 2—100 KW MG Sets, 275 volt DC.

- 2—150KW MG Sets, General Electric and Westinghouse, 250 V. DC.

- 1—200KW MG Set, Westinghouse, rebuilt, 275 V. DC.

- 1—200KW MG Set, General Electric, perfect. 275 volt DC.

- 2—300KW G. E. MG Sets, like new.

- 1—300 KW Westinghouse, 600 volt MG Set, rebuilt.

- 2—300KW Westinghouse, 600 volt, 6 phase, Rotary Converters.

- 2—500KW Westinghouse, 600 volt, DC, 6 phase, Rotary Converters.

- 2—500KW HCC-6's Rotary Converters, 6 phase, 600 volt DC.

- 1—GMC 471 Diesel with 60 KW, 250 volt DC Generator.

- 2—GMC-671 Diesels with 75 KW, 250 volt DC Generators.

- 1—Cummins 125 KW, Diesel with 250 volt DC Generator.

- 1—Allis Chalmers Natural Gas Engine with 100 KW Generator, 275 volt DC.

- Boilers, like new, 500 H.P.

LOADING MACHINES

- 16—Joy Loaders, 14BU, 12BU, 8BU, 11BU 20BU.

- 3—Joy 12BU with Piggyback Conveyors.

- 2—Goodman 865 Loaders, 26" on Crawlers.

- 2—Goodman 660 Loaders, 440 volt AC perfect.

- 1—Goodman 660, on track, Rebuilt, All Hydraulic.

- 2—Jeffrey 61 CLR's, on rubber, 26".

- 3—Jeffrey L-50 Loaders.

- 2—Myers Whaley, No. 3 Automatic Loaders.

- 2—Clarkson Loaders, 26" above rail.

MISCELLANEOUS

- 1—Complete Five Track Tipple with Washers and Air-Tables.

- 5—Complete Tipplers, 3 to 5 Track, Wood and Steel.

- Steel Trestles for drop bottom cars.

- All Steel Arms Buildings.

- 20—Jeffrey Molyveors on rubber tires.

- 1—¾ Yard Shovel and Back-Hoe.

- 1—¾ Yard Crawler Crane.

- Battery Supply Tractors, rubber tired.

- 1—Centrall Air Compressor on rubber tires.

- 10—Air Compressors, 1 H.P. to 40 H.P.

- 2—Joy self propelled rubber tired compressors, 240 cu. ft.

- 2—Acme self propelled rubber tired compressors, 130 cu. ft.

- 40 Mine Pumps, all types.

- 1—Differential 40 Passenger Man-Trip Car.

- 6—MSA Rock Dusters.

- 2—Phillips, Carriers, 44" and 48" Ga.

- 1—Barber Greene Self Propelled Bucket Elevator.

- Pipe, Plastic, Steel, Transit, all sizes 1" to 6".

- 300 Mine Cars, drop bottom, 44" Ga.

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• George O. Tarleton was elected president of the Western Pennsylvania Coal Operators Association last week, succeeding G. A. Shoemaker, who had served more than nine years. Mr. Tarleton is president of the Pittsburgh Coal Co. Division of Consolidation Coal Co. Other officers elected at the annual membership meeting are Charles B. Baton, vice president; Harry A. Sutter, executive vice president; M. C. Briggs, treasurer; and Earl Glass, secretary.

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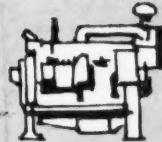
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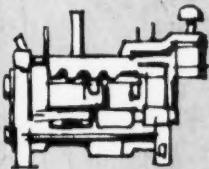
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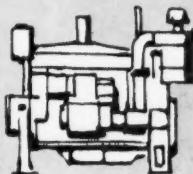
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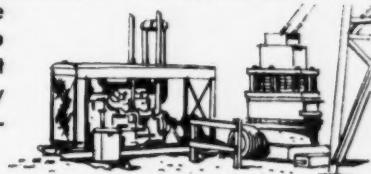
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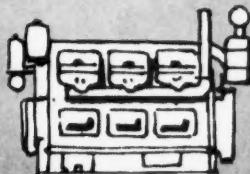
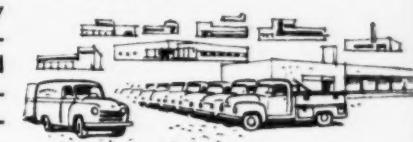
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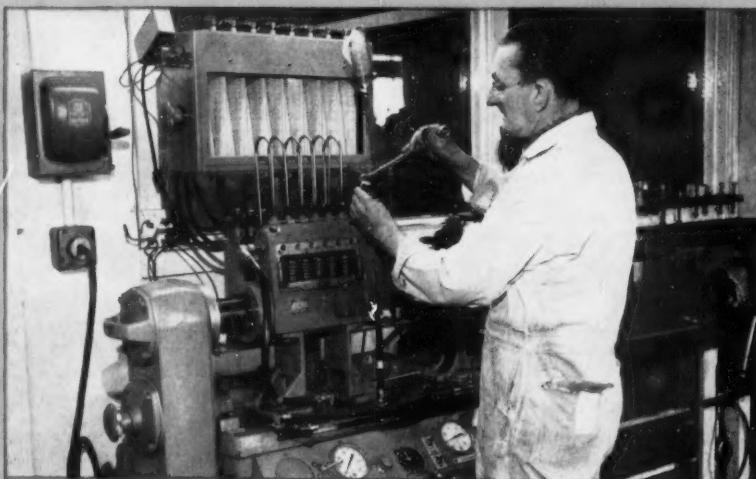
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